

# MID & LONG RANGE UHF READERS

# Nundnet



UHF RFID

Reader of ISO 18000-6C (EPC GEN2) standard



TAGS & CARDS

Compliant with EPC Gen II (ISO 18000-6C) standard

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# MID & LONG RANGE UHF READERS

## Description

# Nundnet



Nundnet, long range readers are compatible with the multiple protocols and can read multiple tag formats. These readers are exclusively designed for indoor & outdoor application.

These are waterproof & suitable for use in wide range of RFID applications like vehicle & transport management, car parking, access control and production process control.

### INTERFACE

NT 9MR series is developed & designed for easy integration into existing digital & electronic management systems in the industry, viz. access controls, car parking & vehicle access control, retail & property management, ID access control for offices and private buildings, handfree operation. The communication interfaces are RS485 for serial communication, open standard industrial protocol wiegand and other protocols.

### MODULATION

NT 9MR series uses Amplitude Shift keying (ASK), that represents the digital data as variations in the amplitude of a carrier wave. Here the binary symbol 1 is represented by transmitting a fixed-amplitude carrier wave & fixed frequency for a bit duration of T seconds. If the signal value is 1 then the carrier signal will be transmitted; otherwise, a signal value of 0 will be transmitted. This is the most sophisticated scheme of modulation which represent the data in groups using an additional amplitude levels.

### HOUSING

NT 9MR enclosures can be subjected to a jet of water from a nozzle of 12.5 mm diameter at a distance of 2.5 ~3 M. The water flow rate can be 100 l/ min applied for a time of 1 min /m<sup>2</sup>, with a minimum of 3 minutes. Hence IPX6 rating means that water cannot penetrate into the device in such a quantity or in such a position that can prove risky for the operation of unit. The IP X6 rating insures that the device can be used for outdoor applications like car parking, gate access etc.

### FCC COMPLIANCE

NT 9MR series equipments has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. This device is designed to provide the reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

#### Wireless Frequency

Available in various operating frequencies 922 ~ 928MHz, 902 ~ 928MHz, 865 ~ 868MHz,



#### Weather Proof Housing

IP X6 rated, Protects from powerful water jets, thereby is waterproof.



#### Hermetically Protected Housing

This protects the inner parts from any sort of vandalism to a very large extent.



#### LED Indicators

Bi Colored LED Indicators to notify power, card detection, card rejection.



#### Sensing Range

The wireless detection or sensing ranges form 5 ~20Meters



### READING RANGE

NT 9MR series are designed to sense Gen2 EPC global are multi frequency 860 ~ 960 MHz. Ultra High Frequency (UHF) passive RFID Tags, and an ideal sensing range 5-20 Meters.

### ISO 18000-6C

It defines air interface parameters for tags operating within the frequency range of 860-960 MHz and allows for use of different frequencies in different regions from within this range. Nundnet NT 9MR offers frequency range of 902~ 928MHz, 865~ 868MHz, 922 ~ 928MHz.



# MID & LONG RANGE UHF READERS

## Specifications



DESCRIPTION	NT 905	NT 910	NT 915	NT 920
Operating frequency	A 865~868MHz B 902 ~ 928MHz C 922 ~ 928 MHz	A 865~868MHz B 902 ~ 928MHz C 922 ~ 928 MHz	A 865~868MHz B 902 ~ 928MHz C 922 ~ 928 MHz	A 865~868MHz B 902 ~ 928MHz D Customization
Modulation	PR-ASK, ASK	PR-ASK, ASK	PR-ASK, ASK	PR-ASK, ASK
Communication	RS 485, Wiegand	Wiegand, RS 485	RS 485, Wiegand	TCP/IP, RS232, RS 485, Wiegand
Supported transponders	EPC Gen 2 ( ISO 18000 - 6C)	EPC Gen 2 ( ISO 18000 - 6C)	EPC Gen 2 ( ISO 18000 - 6C)	EPC Gen 2 ( ISO 18000 - 6C), ISO 18000-6B
Operating voltage	12 V	12 V	12 V	12 V
Current	< 1 A	< 1 A	< 1 A	< 1 A
Temperature	Operating -20°C ~ 55°C Storage -20°C ~ 85°C	Operating -20°C ~ 55°C Storage -20°C ~ 85°C	Operating -20°C ~ 55°C Storage -20°C ~ 85°C	Operating -20°C ~ 55°C Storage -20°C ~ 85°C
Relative humidity	5~ 90%	5~ 90%	5~ 90%	5~ 90%
Reading range*	5 Meters	~< 10 Meters	15 Meters	20 Meters
Transmission power	25 dBm ( adjustable)	27.9 dBm ( adjustable)	24.9 dBm ( adjustable)	30 dBm ( adjustable)
Receiver sensitivity	-85 dBm	-85 dBm	-85 dBm	-85 dBm
Antenna gain	6.5 dBi	8 dBi	11 dBi	12 dBi
Housing	Cover ABS ( Acrylonitrile Butadiene Styrene )	Cover ABS ( Acrylonitrile Butadiene Styrene )	Cover ABS ( Acrylonitrile Butadiene Styrene )	Cover ABS ( Acrylonitrile Butadiene Styrene )
Ingress Protection	IP X6	IP X6	IP X6	IP 65
Dimensions (mm)	117 x 117 x 44mm ( LxWxH )	228 x 228 x 52.3 mm ( LxWxH )	413 x 348 x 38.6mm ( LxWxH )	445 x 445 x 55 ( LxWxH )
Mounting	Wall, Surface	Wall, Surface	Wall, Surface	Wall, Surface
Weight	1.8 Kg	1.5 Kg	1.8 Kg	5 Kg
Certification	FCC, NCC, CE, RoHS	FCC, NCC, CE, RoHS	FCC, NCC, CE, RoHS	FCC, NCC, CE, RoHS

## Tags & cards



DESCRIPTION	THICK CARD	THIN CARD	HARD TAG	SOFT TAG	COIN TAG
Classification	ISO Card	ISO/IEC 18000-6C	ISO 18000-6C	ISO Card	ISO Card
Compliance	EPC Class1 Gen2	EPC Class1 Gen2	EPC Class1 Gen2	EPC Class1 Gen2	EPC Class1 Gen2
Operating Frequency	860~960MHz	860~960MHz	860~960MHz	860~960MHz	860~960MHz
Mode	Passive	Passive	Passive	Passive	Passive
Construction	Aluminum etching PVC	Aluminum etching AL + PET	Copper ABS cover	Aluminum etching PVC	Aluminum/ Copper etching Paper,PET ,PVC
Dimensions	Antenna 70 x 17mm Card 85.6 x 54 x 1.8 mm	Antenna 70 x 17mm Card 85.6 x 54 x 0.5	Antenna 70 x 17mm Card 249 x 13.8 x 6mm	Antenna 70 x 17mm Card 85.6 x 54 x 1.8 mm	Antenna 70 x 17mm Card 10/20/25mm
Temperature	Storage -25°C ~50°C Operation -15°C ~40°C	Storage -25 ~50°C Operation -15 ~40°C	Storage -25°C ~50°C Operation -15°C ~40°C	Storage -25°C ~50°C Operation -15°C ~40°C	Storage -25°C ~50°C Operation -15°C ~40°C
Humidity	90% RH/20°C	90% RH/20°C	80% RH/20°C	90% RH/20°C	90% RH/20°C
ESD (HBM)	2000V	2000V	2000V	2000V	2000V
Distance	Reading 6~15 Meters	Reading 6~15 Meters	Reading 1~12 Meters	Reading 6~15 Meters	Reading 6~15 Meters
Chip type	Allien Higgs3	Allien Higgs3	NXP	Allien Higgs3	Allien Higgs3
Memory	EPC 96 bits. extendable 480bits User 512 bit Passcode 32bit access /32bit kill passcode	EPC 96 bits. extendable 480bits User 512 bit Passcode 32bit access /32bit kill passcode	EPC 96 bits. extendable 480bits User 512 bit Passcode 32bit access /32bit kill passcode	EPC 96 bits. extendable 480bits User 512 bit Passcode 32bit access /32bit kill passcode	EPC 96 bits. extendable 480bits User 512 bit Passcode 32bit access /32bit kill passcode

## ORDERING UHF LONG RANGE READER & TAGS

### NT 9MR XY

MR	X	Y
05 Meter range	A	865~868MHz
10 Meter range	B	902 ~ 928MHz
15 Meter range	C	922 ~ 928 MHz
20 Meter range	D	Customized
	E	RS 232, RS 485, Wiegand
	F	RS 232, TCP/IP
	G	RS 232, WiFi
	H	RS 232, WiFi, TCP/IP

### NT LRT 10XY

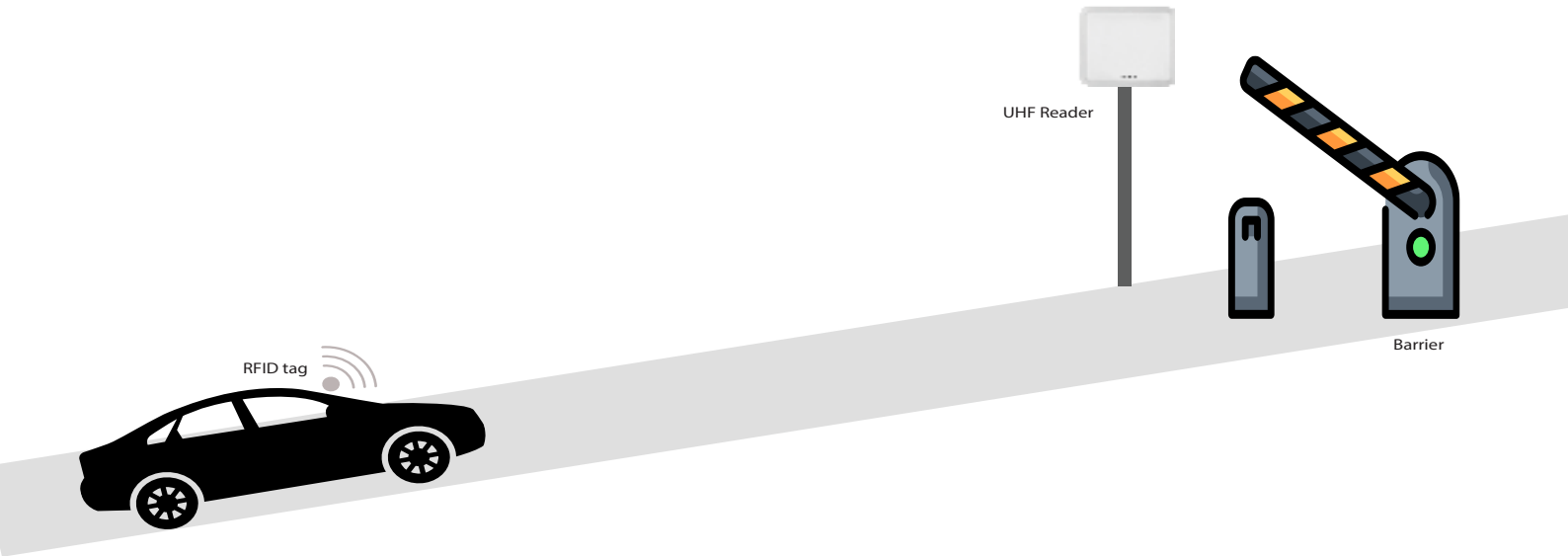
X	Y
T Thick card	A 865~868 MHz
U Thin card	B 902 ~ 928 MHz
H Hard tag	C 922 ~ 928 MHz
S Soft tag	D Customized
C Coin tag	



# MID & LONG RANGE UHF READERS

## Applications

# Nundnet



Car parking & vehicle access control



ID access control for offices & private buildings



Handfree operation



Retail & property management



\* Effective distance depends on antenna, tag and environment.

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